

F. J. STERNER & W. A. ROSE.
PROCESS OF MAKING DECORATED CONCRETE TILES.
APPLICATION FILED MAY 29, 1909.

964,326.

Patented July 12, 1910.

Fig. 1

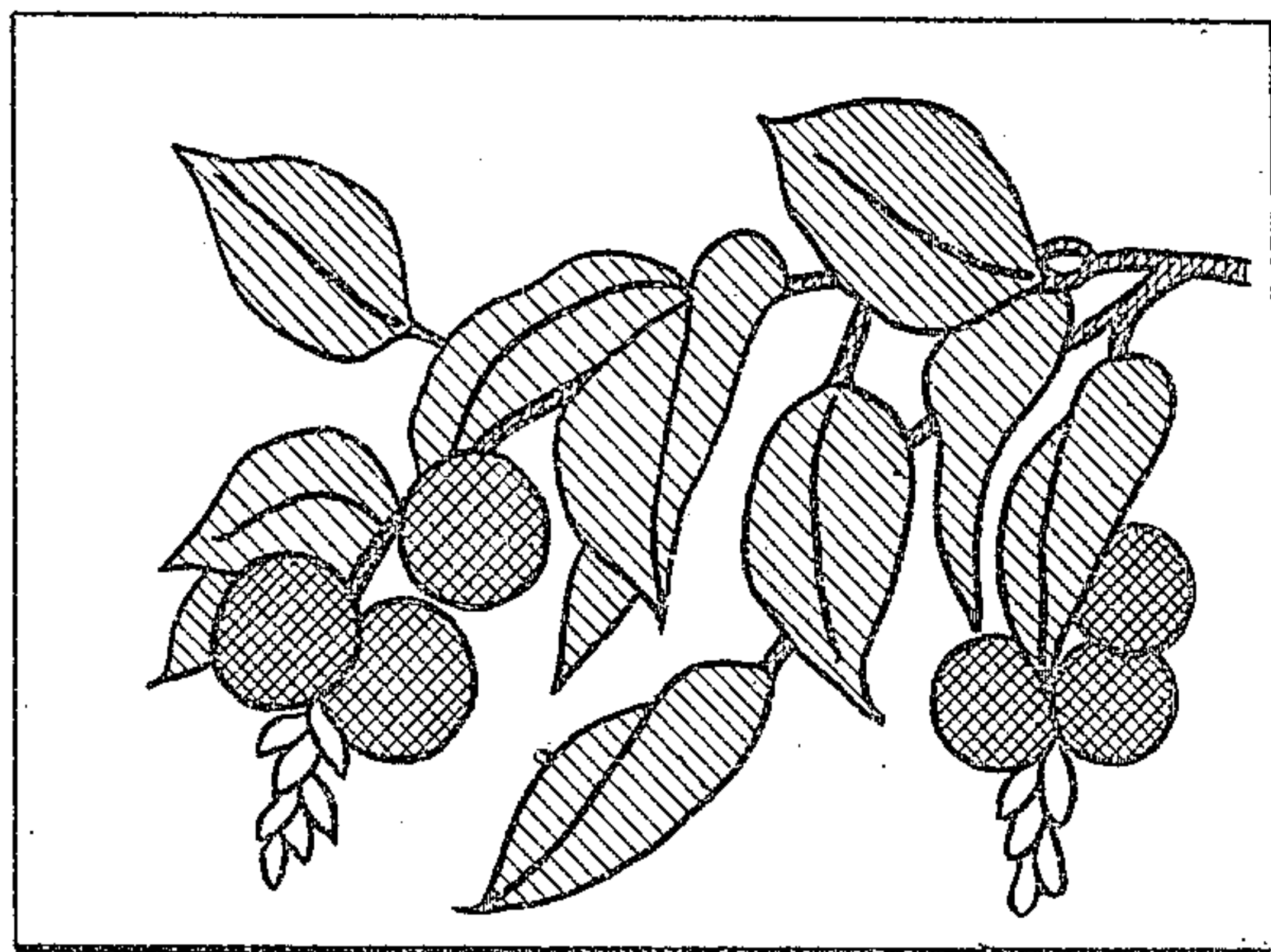


Fig. 2



Fig. 3



Fig. 4

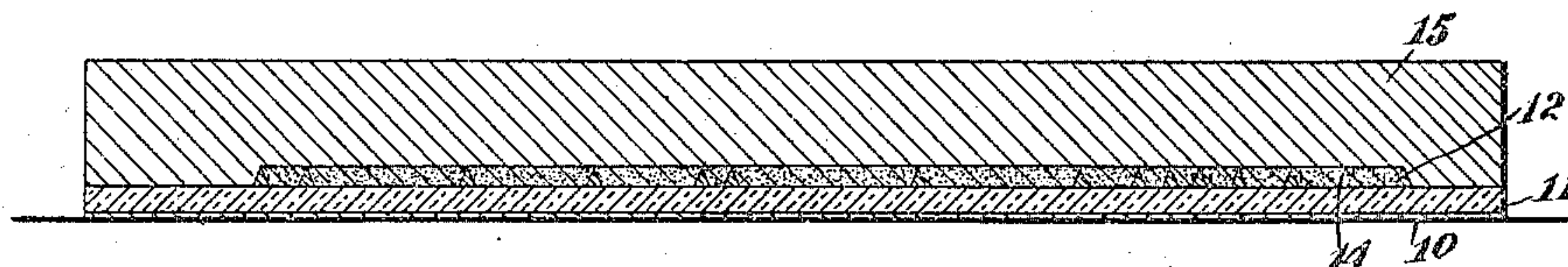
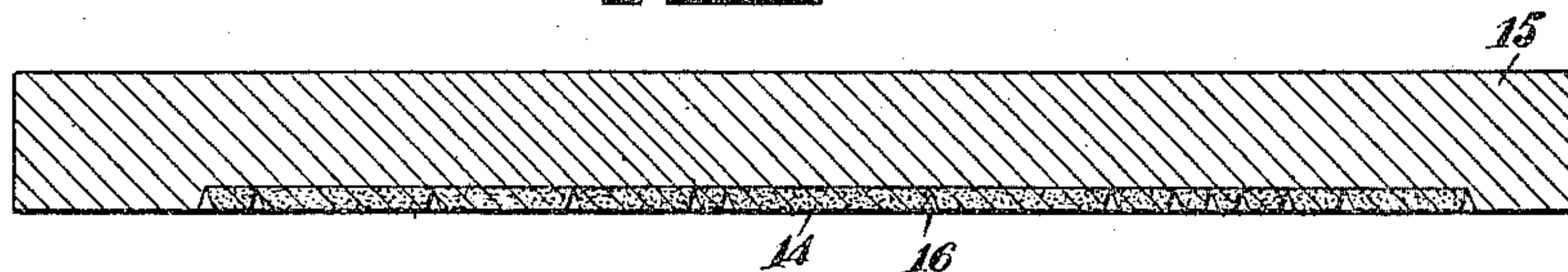


Fig. 5



WITNESSES

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PROCESS OF MAKING DECORATED CONCRETE TILES.

964,326.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed May 29, 1909. Serial No. 499,177.

To all whom it may concern:

Be it known that we, FREDERICK J. STERNER and WILLIAM A. ROSE, both citizens of the United States, and residents of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Process of Making Decorated Concrete Tiles, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in the manufacture of concrete tiles for use in building construction, and more particularly to a process whereby any picture, drawing, design or the like may be reproduced in concrete, in the form of a slab or tile, the different portions of the design being in appropriate colors.

In our improved process we do not use any matrix or any special apparatus, but utilize the material forming the outlines of the design as the partitions to separate the concrete of different colors during the assembling and hardening. No pattern need be employed, as the design may be originated during the formation of the tile.

In forming the tile in accordance with our invention, we first construct a series of ridges, partitions or corrugations of any suitable plastic material and upon any suitable foundation surface. We may, for instance, use a sheet of glass for a foundation surface and may arrange ridges of putty upon this surface to constitute the outlines of the design. These ridges or corrugation will subdivide the face of the foundation surface into a series of very shallow compartments, cells or chambers, each compartment or chamber constituting an element of the design. Into each chamber or compartment is then placed sufficient concrete to approximately fill the same, and of a color suitable for that particular portion of the design. Any suitable coloring material may be mixed with the concrete to form the mass placed in the different compartments.

When each of the cells or compartments has been filled with its appropriately-colored concrete, then a mass of concrete is placed over the entire design, while the concrete in the several chambers or compartments is still soft. This backing may be uncolored, or it may be of any plain color substitute for forming the background of the design. All of the concrete is then permitted to harden and after it has acquired

sufficient rigidity to permit it to be moved, it is raised and the putty or other material going to make up the partitions separating the chambers or compartments, is removed from the concrete. This leaves a slab or tile of concrete with a series of grooves in the face thereof, serving to form the outline of the design, and the different portions of the design will be in appropriate colors.

The design may be varied without limit and the concrete may be any color, combination of colors, or mixture of colors that is suitable for the particular design. A person may use his ingenuity and artistic ability in forming the design, and create the design at the time the ridges or partitions are placed in position, or, if desired, he may follow a design previously drawn upon paper or other material.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a face view of a tile constructed in accordance with our invention; Figs. 2, 3 and 4 are transverse sections showing successive steps in the formation of the tile, and Fig. 5 is a transverse section through the complete tile.

In following a design previously drawn on paper, we may, if desired, first place the sheet of paper 10 bearing the design upon any suitable support and place over it a sheet of glass or other transparent material 11. This permits the design to be readily seen but prevents the concrete from adhering to the paper. Upon the surface of the glass we place ridges 12, following the outlines of the design and constituting partitions subdividing the surface into cells, compartments or chambers 13. Each cell or compartment will correspond to some composite part of the design, and into each compartment is placed concrete 14 of the desired color. This colored concrete 14 may entirely fill the compartments, so as to be flush with the tops of the ridges, or it may terminate below the tops of the ridges. After all of the different colors have been placed in their particular compartments, a mass 15 of concrete is placed on top of the entire plate, so as to cover all of the small portions of concrete 14, and to become integral therewith. After the hardening of the concrete, all of the concrete forming the

backing and also forming the portions of the design, will constitute a single slab which may then be removed from the glass plate 11, and the putty or other material constituting the ridges may be removed to leave grooves 16 in the face of the tile. These grooves form the outlines of the design, and in case the amount of concrete placed in each compartment 13 is insufficient to fill that compartment, then the innermost portion of each groove will be of the same color as the backing of the tile and a slightly different appearance will be given to the face of it.

It is, of course, evident that the glass plate and the paper 10 need not be used if the ridges 12 be formed on a suitable surface and the design be originated or copied from some other design while the ridges are being placed in position.

In the above description we have referred to the use of concrete as the material for forming the tile, but it is, of course, necessary that any other material similar to concrete may be employed in place thereof, that is, any self-hardening material which may be applied in a plastic state.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. The process of forming decorated tiles, consisting in forming upon the surface of a

foundation or the like, a design by means of upwardly-extending ridges or partitions of plastic material separate from the foundation and readily detachable therefrom, filling the compartments or chambers between said partitions to approximately the upper edges of the partitions with suitably colored concrete, and applying a backing or coating of concrete upon the concrete in all of said compartments.

2. The process of forming decorated tiles, consisting in forming upon the surface of a foundation or the like, a design by means of upwardly-extending V-shaped ridges or partitions of plastic material separate from the foundation and readily detachable therefrom, filling the compartments or chambers between said partitions to approximately the upper edges of the partitions with suitably colored concrete, applying a backing or coating of concrete upon the concrete in all of said compartments, and removing the ridges or partitions from the concrete.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

FREDERICK JUNIUS STERNER.
WILLIAM ANDREWS ROSE.

Witnesses:

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E. G. HICKS.